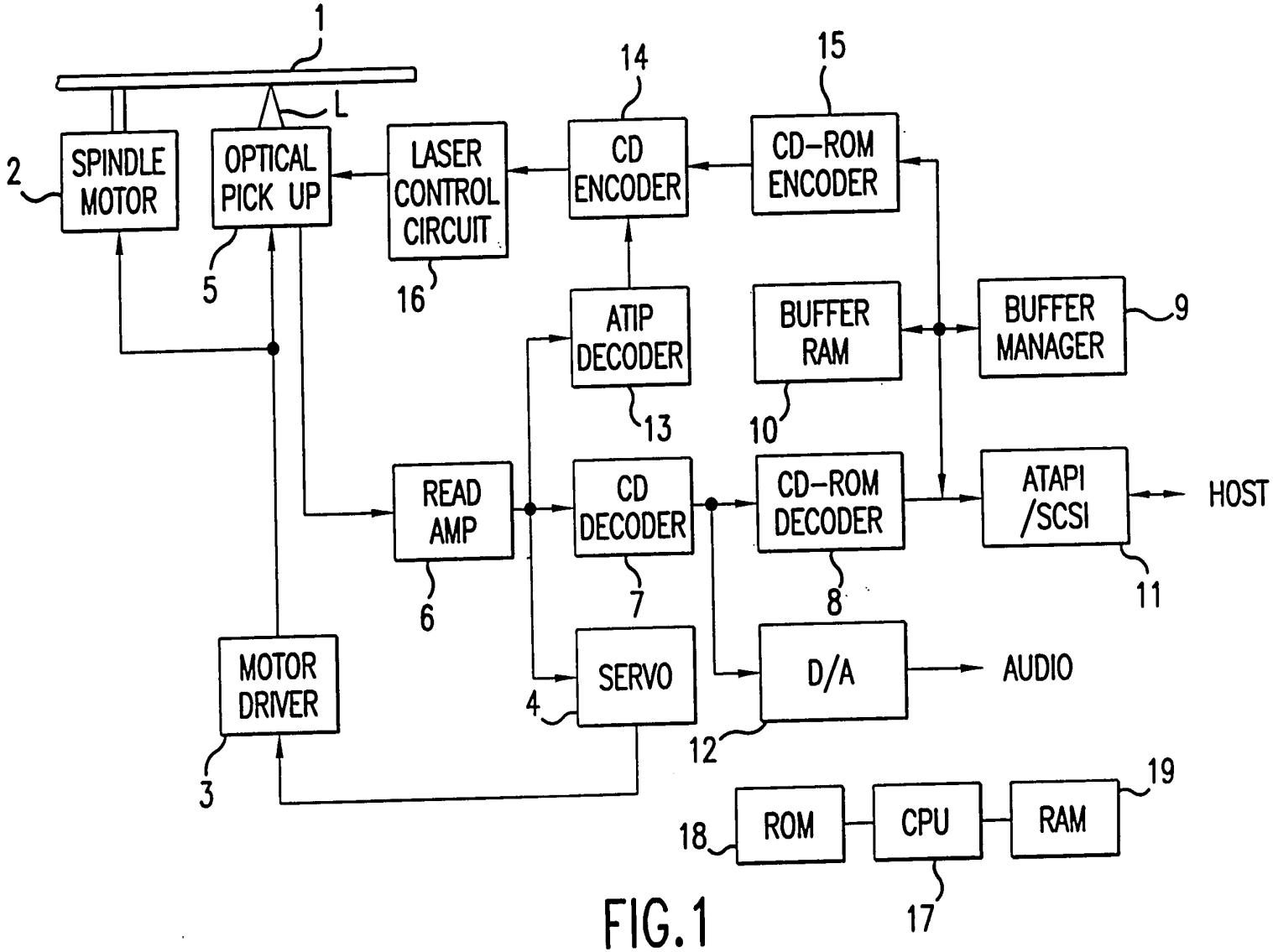
1
L
2
SPINDLE MOTOR
OPTICAL PICK UP
5
LASER CONTROL CIRCUIT
16
14
CD ENCODER
15
CD-ROM ENCODER
ATIP DECODER
13
BUFFER RAM
10
BUFFER MANAGER
9
READ AMP
6
CD DECODER
7
CD-ROM DECODER
8
ATAPI /SCSI
HOST
11
MOTOR DRIVER
3
SERVO
4
D/A
AUDIO
12
ROM
18
CPU
17
RAM
19

FIG.1

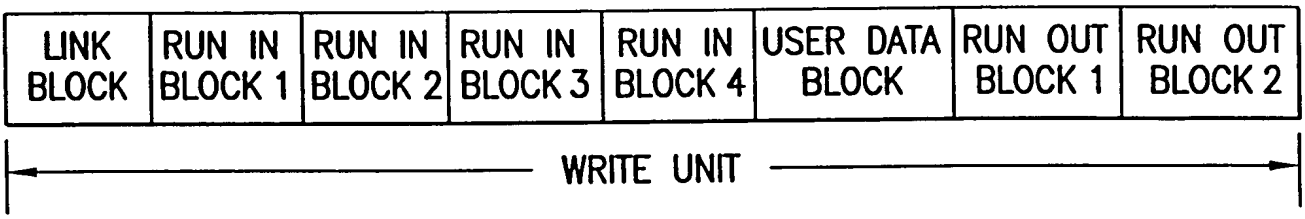
LINK BLOCK
RUN IN BLOCK 1
RUN IN BLOCK 2
RUN IN BLOCK 3
RUN IN BLOCK 4
USER DATA BLOCK
RUN OUT BLOCK 1
RUN OUT BLOCK 2
WRITE UNIT

FIG.2

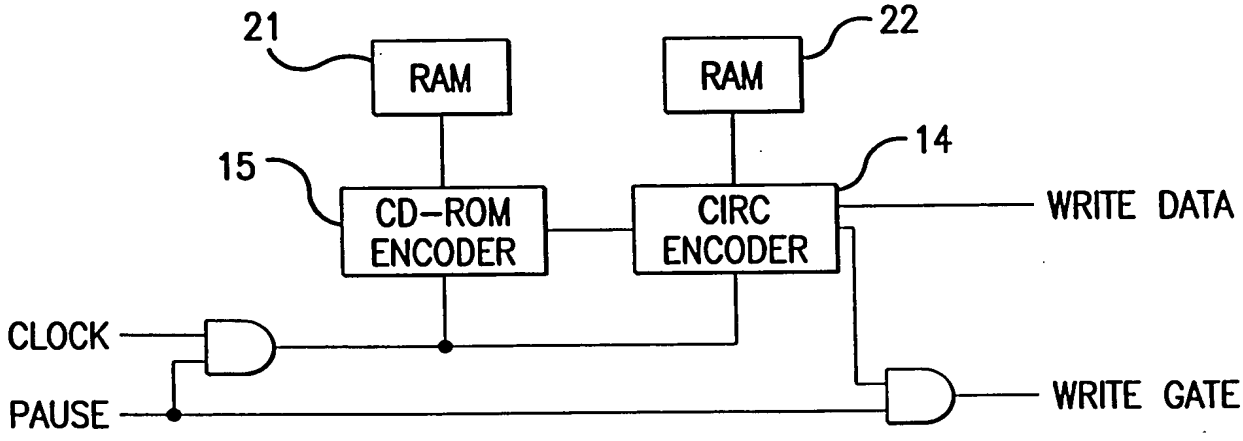
21
RAM
22
RAM
15
CD-ROM ENCODER
14
CIRC ENCODER
WRITE DATA
CLOCK
PAUSE
WRITE GATE

FIG.4

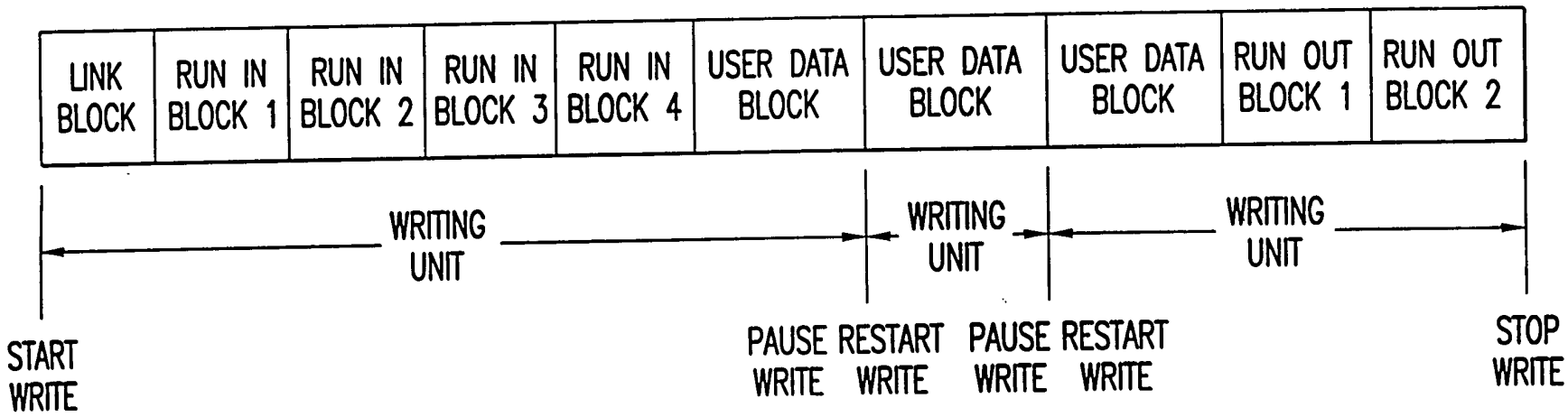
LINK BLOCK
RUN IN BLOCK 1
RUN IN BLOCK 2
RUN IN BLOCK 3
RUN IN BLOCK 4
USER DATA BLOCK
USER DATA BLOCK
USER DATA BLOCK
RUN OUT BLOCK 1
RUN OUT BLOCK 2
WRITING UNIT
WRITING UNIT
WRITING UNIT
START WRITE
PAUSE WRITE
RESTART WRITE
PAUSE WRITE
RESTART WRITE
STOP WRITE

FIG.3

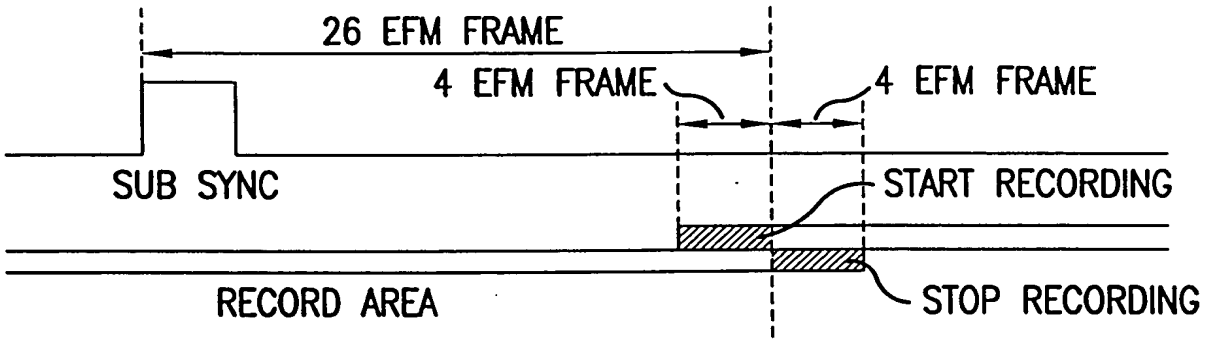
26 EFM FRAME
4 EFM FRAME
4 EFM FRAME
SUB SYNC
START RECORDING
RECORD AREA
STOP RECORDING

FIG.5

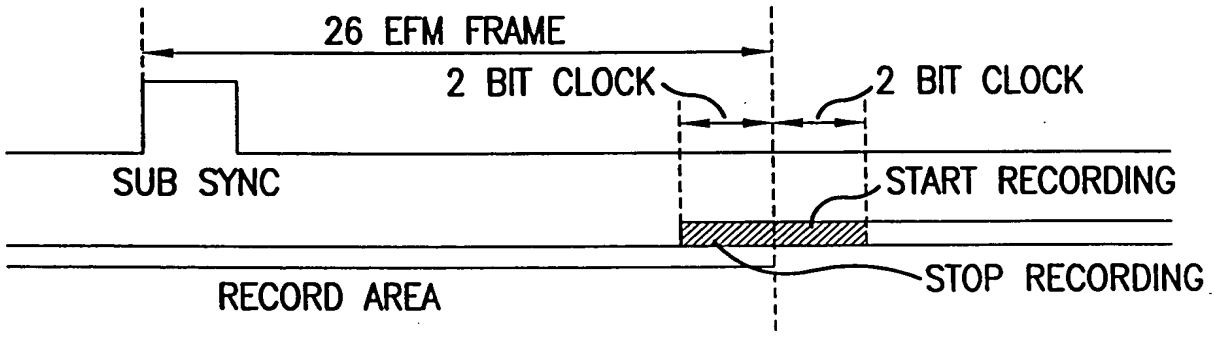
26 EFM FRAME
2 BIT CLOCK
2 BIT CLOCK
SUB SYNC
START RECORDING
RECORD AREA
STOP RECORDING

FIG.6

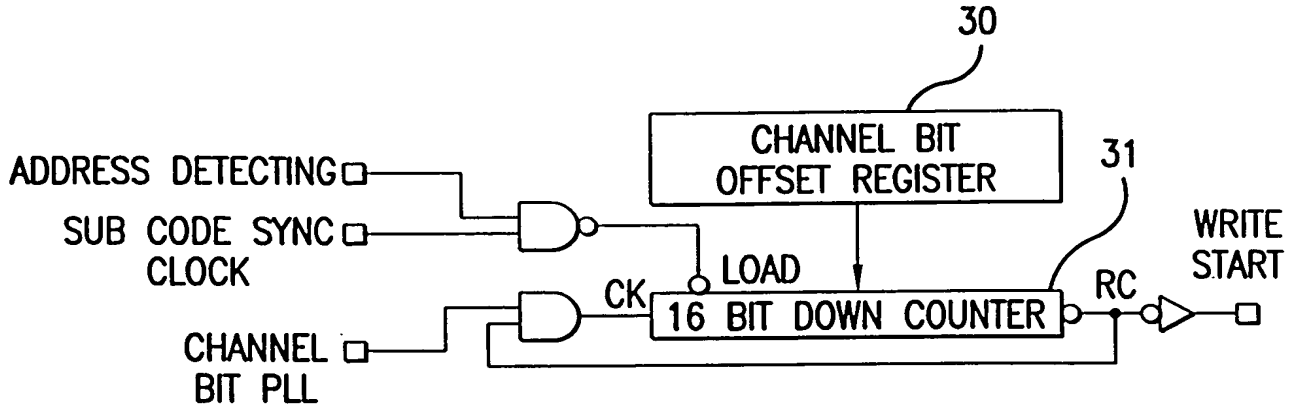
30
CHANNEL BIT
OFFSET REGISTER
31
ADDRESS DETECTING
SUB CODE SYNC
CLOCK
LOAD
CK
16 BIT DOWN COUNTER
RC
WRITE
START
CHANNEL
BIT PLL

FIG.7

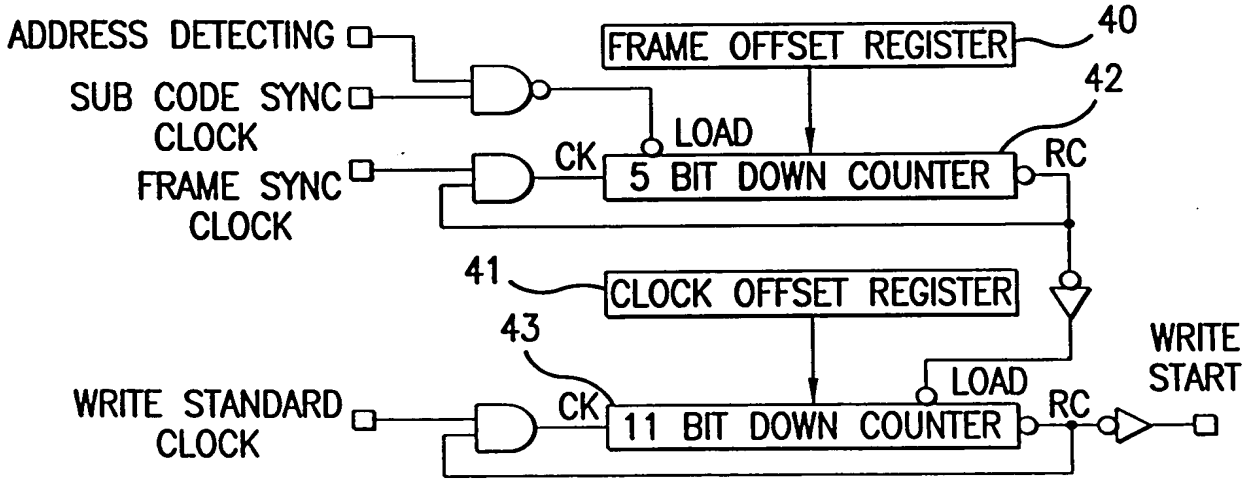
ADDRESS DETECTING
FRAME OFFSET REGISTER
40
SUB CODE SYNC
CLOCK
42
LOAD
CK
5 BIT DOWN COUNTER
RC
FRAME SYNC
CLOCK
41
CLOCK OFFSET REGISTER
43
WRITE
START
LOAD
WRITE STANDARD
CLOCK
CK
11 BIT DOWN COUNTER
RC

FIG.9

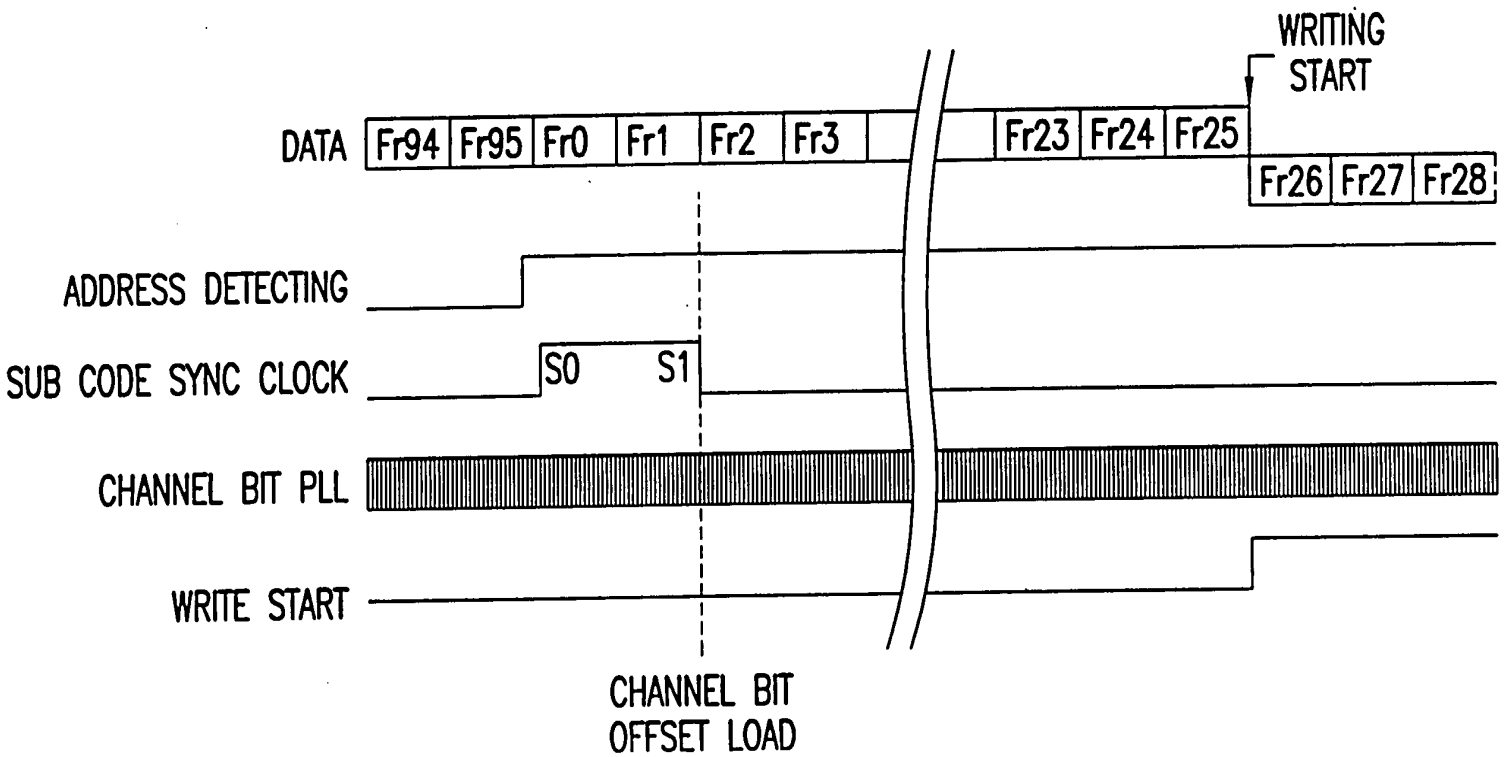
WRITING
START
DATA
Fr94
Fr95
Fr0
Fr1
Fr2
Fr3
Fr23
Fr24
Fr25
Fr26
Fr27
Fr28
ADDRESS DETECTING
SUB CODE SYNC CLOCK
S0
S1
CHANNEL BIT PLL
WRITE START
CHANNEL BIT
OFFSET LOAD

FIG.8

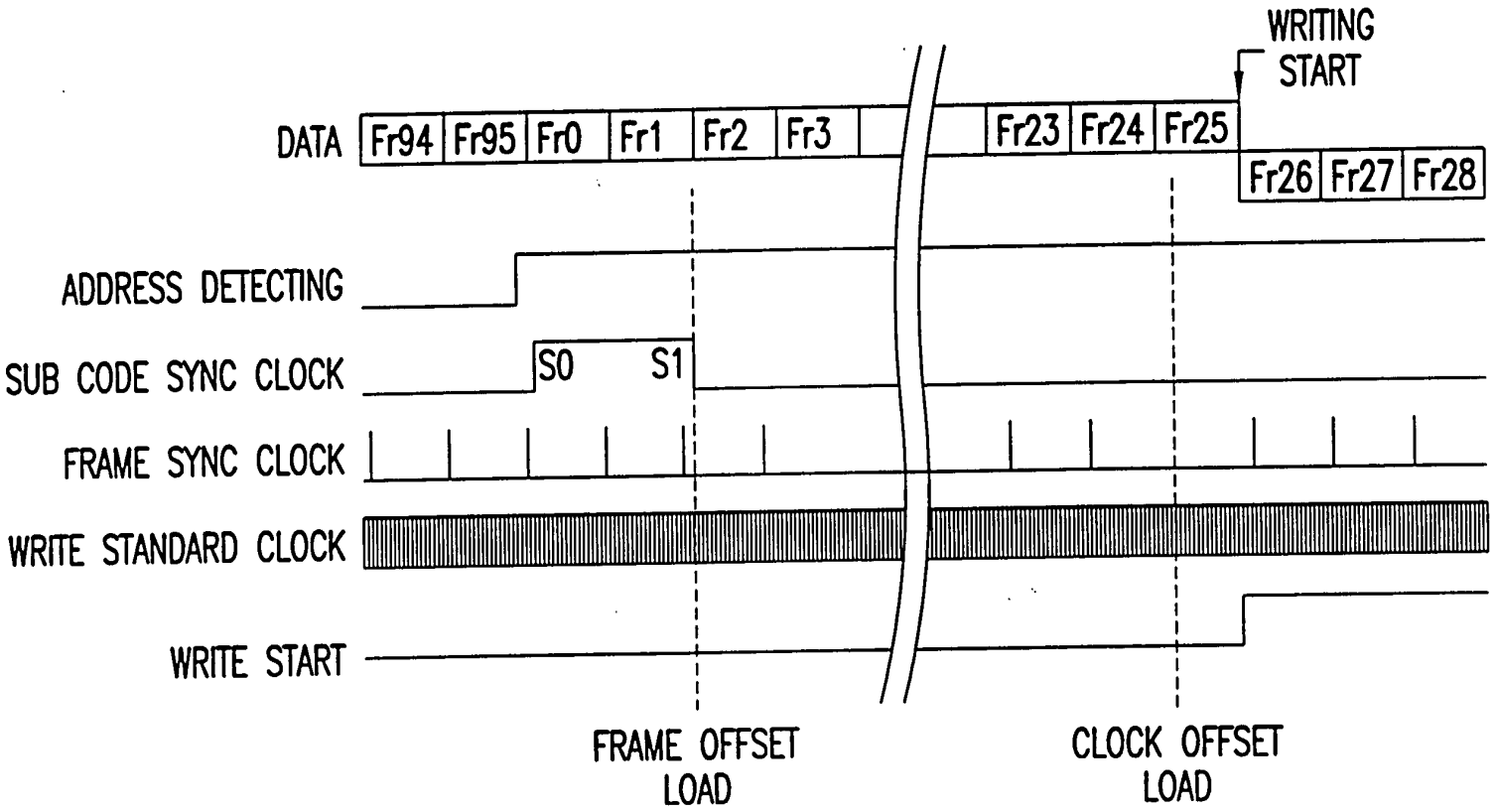
WRITING
START
DATA
Fr94
Fr95
Fr0
Fr1
Fr2
Fr3
Fr23
Fr24
Fr25
Fr26
Fr27
Fr28
ADDRESS DETECTING
SUB CODE SYNC CLOCK
S0
S1
FRAME SYNC CLOCK
WRITE STANDARD CLOCK
WRITE START
FRAME OFFSET
LOAD
CLOCK OFFSET
LOAD

FIG.10

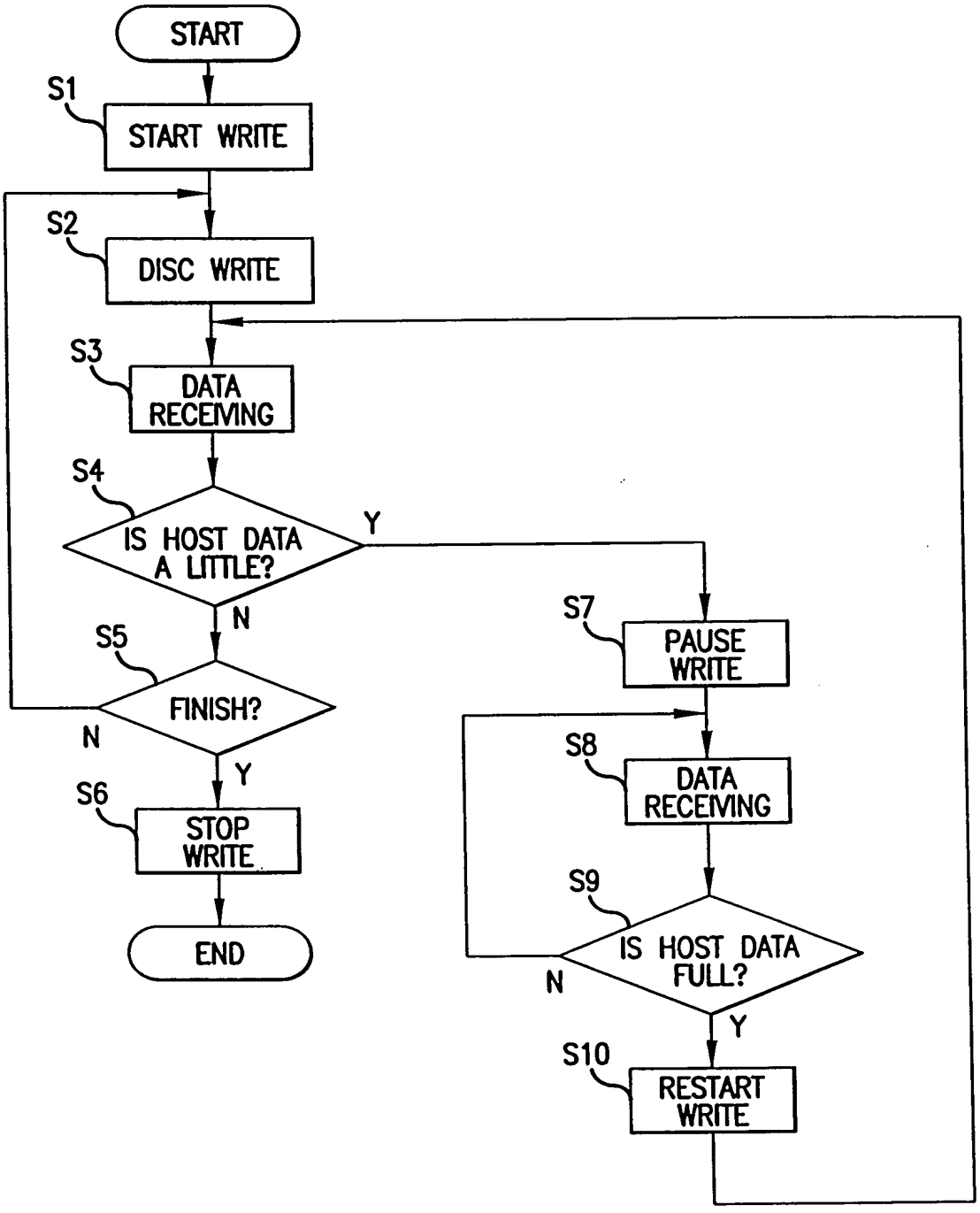
START
S1
START WRITE
S2
DISC WRITE
S3
DATA RECEIVING
S4
IS HOST DATA A LITTLE?
Y
N
S5
FINISH?
N
Y
S6
STOP WRITE
END
S7
PAUSE WRITE
S8
DATA RECEIVING
S9
IS HOST DATA FULL?
N
Y
S10
RESTART WRITE

FIG.11

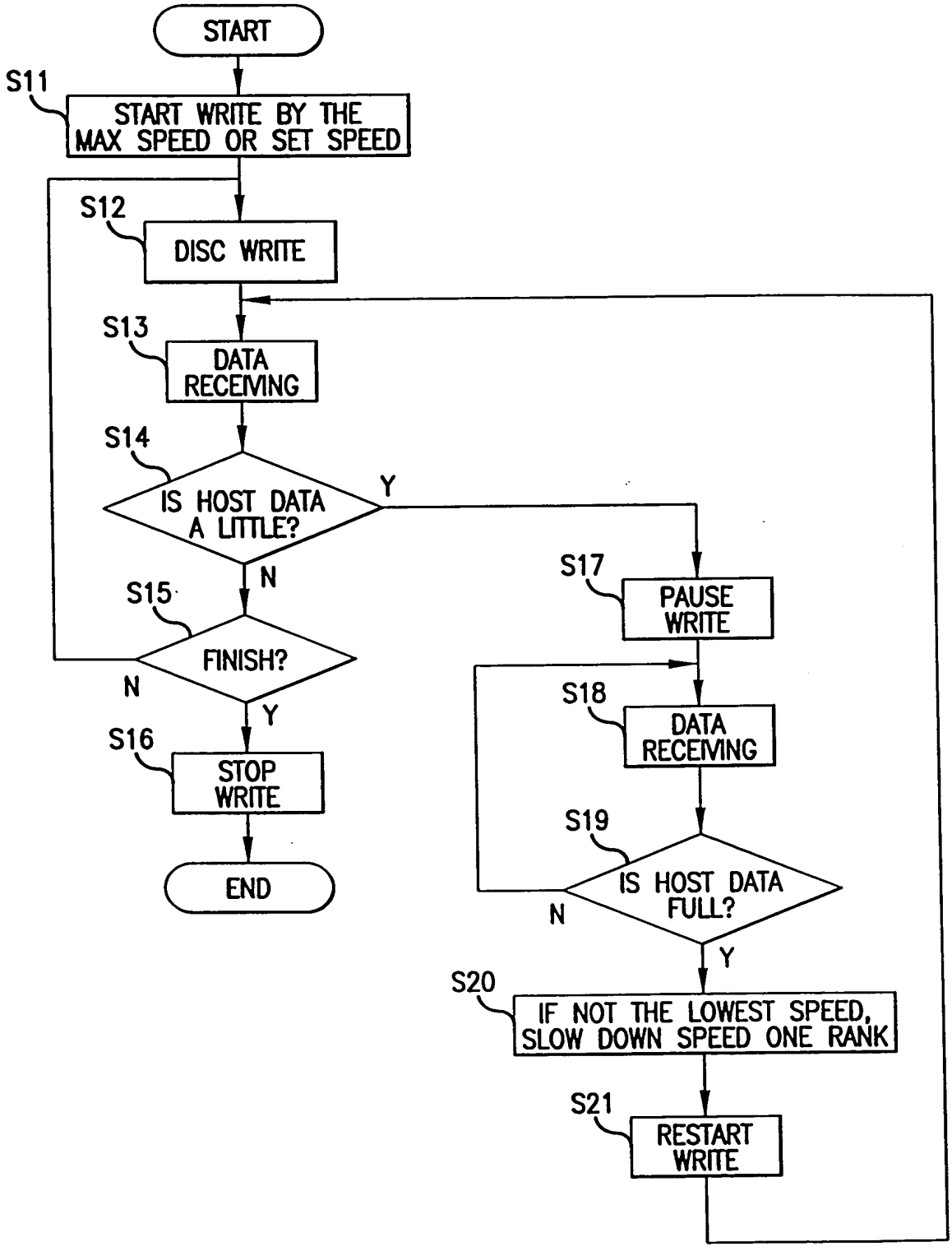
START
S11
START WRITE BY THE MAX SPEED OR SET SPEED
S12
DISC WRITE
S13
DATA RECEIVING
S14
IS HOST DATA A LITTLE?
Y
N
S15
FINISH?
N
Y
S16
STOP WRITE
END
S17
PAUSE WRITE
S18
DATA RECEIVING
S19
IS HOST DATA FULL?
N
Y
S20
IF NOT THE LOWEST SPEED, SLOW DOWN SPEED ONE RANK
S21
RESTART WRITE

FIG.12